

### State Revolving Fund Loan Programs Drinking Water, Wastewater, Nonpoint Source

### ENVIRONMENTAL ASSESSMENT AND

### FINDING OF NO SIGNIFICANT IMPACT

### CITY OF FORT WAYNE SEWER SEPARATION AND REHABILITATION PROJECTS STATE REVOLVING FUND PROJECT WW 09 09 02 03

**DATE: August 12, 2009** 

TARGET PROJECT APPROVAL DATE: September 11, 2009

### I. INTRODUCTION

The above entity has applied to the Clean Water State Revolving Fund (CWSRF) Loan Program for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA, which can also be viewed at http://www.in.gov/ifa/srf/.

### II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The CWSRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

### III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Max Henschen
Senior Environmental Manager
State Revolving Fund
100 N. Senate Ave. IGCN 1275
Indianapolis, IN 46204
317-232-8623; mhensche at ifa.in.gov

### ENVIRONMENTAL ASSESSMENT

### I. PROJECT IDENTIFICATION

Project Name and Address: City of Fort Wayne

Sewer Separation & Rehabilitation Projects

One East Main Street Fort Wayne, IN 46802

SRF Project Number: WW 09 09 02 03

Authorized Representative: Kumar Menon

Director of Public Works and Utilities

### II. PROJECT LOCATION

Fort Wayne is located in central Allen County. The sewer separation project locations are shown as symbols 5, 8 and 12 on Figure 1; the sewer rehabilitation/CIPP projects are scattered throughout the city.

Woodrow /Vance Sewer Separation: The project area is Wayne Township in the Fort Wayne East USGS 7.5 minute quadrangle, Township 31N, Range 12E, sections 25 and 36, and Fort Wayne West quadrangle, T31N, R12E, section 25. All construction work will take place in street right-of-ways or easements. See Figure 2.

Smith and Roosevelt Phase II Sewer Separation: The project area is in Wayne Township in the Fort Wayne East USGS quadrangle, T30N, R12E, SE ¼ of Section 24. All construction work will take place in street rights-of-way or existing easements. See Figure 3.

**Penn Avenue Area Sewer Separation**: The project area is in Washington and Wayne townships, in Fort Wayne West quadrangle, T31N, R12E, SE ¼ of Section 26 and SW ¼ of Section 25. Washington Township is north of Penn Ave., and Wayne Township is south of Penn. All construction work will take place in existing street rights-of-way or existing easements. See Figure 4.

**Sewer Rehabilitation/CIPP Lining**: This project is located at scattered sites throughout Fort Wayne. See Figure 5.

### III. PROJECT NEED AND PURPOSE

Fort Wayne has a combined sewer system with numerous Combined Sewer Overflows (CSOs). In a combined sewer system, both storm water and sanitary wastewater flow into common sewers; that combined flow is meant to be sent to a treatment facility. However, during heavy storms, the flow often exceeds the capacity of the collection system and treatment facility; the excess flow is discharged into streams and rivers through the CSOs. Because of concerns about water quality

and public health related to these discharges, Fort Wayne developed a Long Term Control Plan (LTCP), as required by USEPA and Indiana environmental regulations. The wastewater projects described in this document address CSOs and will meet objectives in the city's LTCP, which has been approved by the Indiana Department of Environmental Management.

The Woodrow/Vance Sewer Separation project will separate the combined sewers in the area by (1) installing new storm sewers, (2) installing up to eight water quality Best Management Practices (BMPs) in the form of Low Impact Development bioretention areas to catch surface runoff, and (3) modifying two regulator structures to minimize combined sewer contributions. The sewer separation will reduce the frequency and volume of discharges from CSOs 51, 53, and 68. The project will also eliminate basement backups and street flooding for the design storm. The area is a priority of the city's LTCP.

The Smith and Roosevelt Phase II Sewer Separation project to install new storm and sanitary sewers is the culmination of the city's sewer separation efforts in this area to meet the city's LTCP as Control Measure No. 4. The project will reduce rainy weather surcharges, basement flooding and the frequency and volume of discharges from CSO 54.

The Penn Avenue Area Sewer Separation project is also part of LTCP Control Measure No. 4. The city will install new storm sewers to reduce the frequency and volume of discharges from CSO 45.

The Sewer Rehabilitation/CIPP lining project is part of the city's ongoing evaluation of the collection system. In 1998, to comply with the Nine Minimum Controls as required in the LTCP, the city began a priority-ranking repair program, which assists the city in meeting the LTCP's objectives. This project will address cracked or otherwise compromised sewers which can be rehabilitated by the cured-in place pipe (CIPP) technique, a trenchless technology.

### IV. PROJECT DESCRIPTION

### Woodrow/Vance Sewer Separation:

- Installation of approximately 13,504 feet of 12- to 42-inch diameter storm sewer;
- Construction of approximately eight water quality BMPs in the form of low impact development bio retention areas, and
- Modification of two existing CSO regulator structures.

### Smith and Roosevelt Phase II Sewer Separation:

- Installation of 1,000 feet of 12- to 15-inch diameter storm sewer;
- Installation of 900 feet of 10-inch diameter sanitary sewer, and
- Smoke Testing/ Data Collection
- Infiltration/Inflow Removal

### Penn Avenue Area Sewer Separation:

• Installation of approximately 1,000 feet of 12- and 15-inch storm sewer.

### Sewer Rehabilitation/CIPP Lining:

• The project consists of rehabilitating approximately 23,400 feet of 8- to 24-inch diameter pipe by CIPP.

### V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

### A. Selected Plan Estimated Cost Summary

Construction Costs         360,000           Mobilization/Demobilization         35,000           Asphalt and Concrete Road Repairs         305,380           Granular Backfill         304,980           Sidewalks         133,460           Concrete Curbs         36,810           Seeding         1,360           Inlets         315,900           Plug Regulators         12,000           Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         14,000           Tee Removal         26,100           Construction Sub-Total         3,260,885           Non-Construction Cots         226,100           Legal and Accounting         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         31,000           Traffic Control         4,000           Smith and Roosevelt Phase II Sewer Separation         494,150           Mobilization/Demobilization         31,000           Traffic Control         20,000	Woodrow/Vance Sewer Separation		
Traffic Control         35,000           Asphalt and Concrete Road Repairs         305,380           Granular Backfill         304,980           Sidewalks         133,460           Concrete Curbs         36,810           Seeding         1,360           Inlets         12,000           Plug Regulators         12,000           Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         3,260,885           Construction Contingency (10%)         326,100           Tree Removal         8,500           Design Engineering         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         4,000           Moodrow/Vance Sewer Separation Estimated Costs         494,150           Woodrow/Vance Sewer Separation Estimated Costs         4081,135           Smith and Roosevelt Phase II Sewer Separation         29,000           Traffic Control         6,000           Smoke Testing/Data Collection         20,000           Infiltratio			
Asphalt and Concrete Road Repairs         305,380           Granular Backfill         304,980           Sidewalks         133,460           Concrete Curbs         36,810           Seeding         1,360           Inlets         315,900           Plug Regulators         12,000           Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         3,260,885           Construction Contingency (10%)         326,100           Construction Sub-Total         3,500,885           Non-Construction Engineering         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         40,000           Audition/Demobilization Sub-Total         40,811,35           Smith and Roosevelt Phase II Sewer Separation         299,250           Construction Costs         31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         25,000           Manholes		\$	-
Granular Backfill         304,980           Sidewalks         133,460           Concrete Curbs         36,810           Seeding         1,360           Inlets         315,900           Plug Regulators         12,000           Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         3,266,885           Construction Contingency (10%)         326,100           Construction Sub-Total         \$ 8,500           Construction Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         4,000           Land Acquisition         40,000           Woodrow/Vance Sewer Separation Estimated Costs         4,081,135           Smith and Roosevelt Phase II Sewer Separation         5           Construction Costs         31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         25,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm S			,
Sidewalks         133,460           Concrete Curbs         36,810           Seeding         1,360           Inlets         315,900           Plug Regulators         12,000           Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         14,000           Tree Removal         3,260,885           Construction Contingency (10%)         326,100           Construction Sub-Total         \$3,586,985           Non-Construction Costs         8,500           Legal and Accounting         \$8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         182,400           Land Acquisition         4000           Mobilization/Demobilization Estimated Costs         4081,135           Smith and Roosevelt Phase II Sewer Separation         6,000           Smith and Roosevelt Phase II Sewer Separation         26,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inf			,
Concrete Curbs         36,810           Seeding         1,360           Inlets         315,900           Plug Regulators         12,000           Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         3,260,885           Construction Contingency (10%)         326,100           Construction Sub-Total         3,586,985           Non-Construction Costs         299,250           Legal and Accounting         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         Non-construction Sub-Total         4001,400           Mobilization/Demobilization         31,000           Traffic Control         6,000           Smith and Roosevelt Phase II Sewer Separation         27,000           Infiltration/Inflow Elimination         250,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500 <td></td> <td></td> <td>-</td>			-
Seeding         1,360           Inlets         315,900           Plug Regulators         12,000           Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         14,000           Construction Contingency (10%)         326,100           Construction Sub-Total         3,586,985           Non-Construction Costs         299,250           Legal and Accounting         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         4000           Non-construction Sub-Total         4494,150           Woodrow/Vance Sewer Separation Estimated Cost         4,081,135           Smith and Roosevelt Phase II Sewer Separation         27,000           Infiltration/Inflow Elimination         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           Manholes and Inlets         25,000           Granular Backfill         46,200           Street Removal and Replacement         10,000 <td>Sidewalks</td> <td></td> <td>•</td>	Sidewalks		•
Inlets	Concrete Curbs		•
Plug Regulators	Seeding		1,360
Manholes         428,600           Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         3,260,885           Construction Contingency (10%)         326,100           Construction Sub-Total         3,586,985           Non-Construction Sub-Total         3,586,985           Non-Construction Sub-Total         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         40,000           Woodrow/Vance Sewer Separation Estimated Cost         4,081,135           Smith and Roosevelt Phase II Sewer Separation         4,081,135           Smith and Roosevelt Phase II Sewer Separation         25,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000 <td>Inlets</td> <td></td> <td>315,900</td>	Inlets		315,900
Storm Sewer 12- to 42-inch         1,002,595           Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         14,000           Sa,260,885         3,260,885           Construction Contingency (10%)         326,100           Construction Sub-Totals \$ 3,586,985           Non-Construction Costs           Legal and Accounting         \$ 8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         4000           Woodrow/Vance Sewer Separation Estimated Cost         494,150           Mobilization/Demobilization         \$ 31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         25,500           Concrete Curb         25,500	Plug Regulators		12,000
Side Street Infiltration Planter         120,540           Pervious Concrete Sidewalk         190,260           Tree Removal         14,000           \$ 3,260,885         326,100           Construction Contingency (10%)         Construction Sub-Total \$ 3,586,985           Non-Construction Costs           Legal and Accounting         \$ 8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         4000           Woodrow/Vance Sewer Separation Estimated Cost \$         494,150           Mobilization/Demobilization         \$ 31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000	Manholes		428,600
Pervious Concrete Sidewalk         190,260           Tree Removal         14,000           S 3,260,885         3,260,885           Construction Contingency (10%)         Construction Sub-Total         3,586,985           Non-Construction Costs           Legal and Accounting         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         40,000           Non-construction Sub-Total         494,150           Woodrow/Vance Sewer Separation Estimated Cost         494,150           **Smith and Roosevelt Phase II Sewer Separation         31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         22,500           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         <	Storm Sewer 12- to 42-inch		1,002,595
Tree Removal         14,000           Construction Contingency (10%)         3,260,885           Construction Sub-Total         3,261,00           Construction Sub-Total         3,586,985           Non-Construction Costs           Legal and Accounting         8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         40,000           Woodrow/Vance Sewer Separation Estimated Costs         494,150           **Smith and Roosevelt Phase II Sewer Separation         31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000	Side Street Infiltration Planter		120,540
Tree Removal         14,000           Construction Contingency (10%)         3,260,885           Construction Sub-Total         3,261,000           Construction Sub-Total         3,586,985           Non-Construction Costs           Legal and Accounting         299,250           Construction Engineering and Observation         182,400           Land Acquisition         Non-construction Sub-Total         40,000           Woodrow/Vance Sewer Separation Estimated Cost         494,150           **Smith and Roosevelt Phase II Sewer Separation         31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         22,500           Restoration         14,000           Concrete Curb         25,500           Restoration         14,000           Video Taping         2,000	Pervious Concrete Sidewalk		190,260
Construction Contingency (10%)   Construction Sub-Total \$ 3,586,985			14,000
Construction Contingency (10%)   Construction Sub-Total \$ 3,586,985		\$	3,260,885
Construction Sub-Total \$ 3,586,985	Construction Contingency (10%)		
Non-Construction Costs           Legal and Accounting         \$ 8,500           Design Engineering         299,250           Construction Engineering and Observation         182,400           Land Acquisition         4,000           Non-construction Sub-Total \$ 494,150           Woodrow/Vance Sewer Separation Estimated Cost \$ 4,081,135           Smith and Roosevelt Phase II Sewer Separation           Construction Costs         \$ 31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000		ion Sub-Total \$	
Legal and Accounting       \$ 8,500         Design Engineering       299,250         Construction Engineering and Observation       182,400         Land Acquisition       4,000         Non-construction Sub-Total \$ 494,150         Woodrow/Vance Sewer Separation Estimated Cost \$ 4,081,135         Smith and Roosevelt Phase II Sewer Separation         Construction Costs       5         Mobilization/Demobilization       \$ 31,000         Traffic Control       6,000         Smoke Testing/Data Collection       27,000         Infiltration/Inflow Elimination       250,000         10-inch Sanitary Sewer       40,500         12- to 15-inch Storm Sewer       52,000         Manholes and Inlets       25,500         Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000			- , ,
Design Engineering   299,250		\$	8,500
Construction Engineering and Observation         182,400           Land Acquisition         4,000           Non-construction Sub-Total \$ 494,150           Woodrow/Vance Sewer Separation Estimated Cost \$ 4,081,135           Smith and Roosevelt Phase II Sewer Separation           Construction Costs         \$ 31,000           Mobilization/Demobilization         \$ 31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000	<u> </u>	*	-
Non-construction Sub-Total   4,000   494,150   494,150   4081,135			•
Non-construction Sub-Total \$	<u> </u>		•
Woodrow/Vance Sewer Separation Estimated Cost \$ 4,081,135           Smith and Roosevelt Phase II Sewer Separation           Construction Costs         31,000           Mobilization/Demobilization         \$ 31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000		on Sub-Total \$	
Smith and Roosevelt Phase II Sewer SeparationConstruction Costs\$ 31,000Mobilization/Demobilization\$ 31,000Traffic Control6,000Smoke Testing/Data Collection27,000Infiltration/Inflow Elimination250,00010-inch Sanitary Sewer40,50012- to 15-inch Storm Sewer52,000Manholes and Inlets25,500Granular Backfill46,200Street Removal and Replacement80,000Driveway Replacement10,000Concrete Curb25,500Restoration14,000Utilities Adjustments7,000Video Taping2,000			
Construction Costs         \$ 31,000           Mobilization/Demobilization         \$ 31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000	(voodfow) vance sewer separation 250		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Mobilization/Demobilization         \$ 31,000           Traffic Control         6,000           Smoke Testing/Data Collection         27,000           Infiltration/Inflow Elimination         250,000           10-inch Sanitary Sewer         40,500           12- to 15-inch Storm Sewer         52,000           Manholes and Inlets         25,500           Granular Backfill         46,200           Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000		on	
Traffic Control       6,000         Smoke Testing/Data Collection       27,000         Infiltration/Inflow Elimination       250,000         10-inch Sanitary Sewer       40,500         12- to 15-inch Storm Sewer       52,000         Manholes and Inlets       25,500         Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000		<b>C</b>	21.000
Smoke Testing/Data Collection       27,000         Infiltration/Inflow Elimination       250,000         10-inch Sanitary Sewer       40,500         12- to 15-inch Storm Sewer       52,000         Manholes and Inlets       25,500         Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000		Ф	
Infiltration/Inflow Elimination       250,000         10-inch Sanitary Sewer       40,500         12- to 15-inch Storm Sewer       52,000         Manholes and Inlets       25,500         Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000			•
10-inch Sanitary Sewer       40,500         12- to 15-inch Storm Sewer       52,000         Manholes and Inlets       25,500         Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000			
12- to 15-inch Storm Sewer       52,000         Manholes and Inlets       25,500         Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000			,
Manholes and Inlets       25,500         Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000	•		•
Granular Backfill       46,200         Street Removal and Replacement       80,000         Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000			•
Street Removal and Replacement         80,000           Driveway Replacement         10,000           Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000			
Driveway Replacement       10,000         Concrete Curb       25,500         Restoration       14,000         Utilities Adjustments       7,000         Video Taping       2,000			•
Concrete Curb         25,500           Restoration         14,000           Utilities Adjustments         7,000           Video Taping         2,000	-		•
Restoration14,000Utilities Adjustments7,000Video Taping2,000	* -		
Utilities Adjustments7,000Video Taping2,000			-
Video Taping 2,000	Restoration		
	Video Taping	· •	2,000

Construction Contingency (10%)

617,300 61,800

679,100

Construction Sub-Total \$

Non-Construction Costs	
Legal and Accounting	1,200
Design Engineering	92,600
Construction Engineering and Observation	_61,700
Non-Construction Sub-Total \$	
Smith and Roosevelt Phase II Sewer Separation Estimated Cost S	834,600
Penn Avenue Area Sewer Separation	
Construction Costs	
Mobilization/Demobilization \$	13,500
Traffic Control	5,500
Storm Sewer Pipe	57,500
Granular Backfill	19,240
Unsuitable Fill Removal	24,000
Manholes and Inlets	12,800
Concrete and Asphalt Street Replacement	15,850
Concrete Sidewalk Replacement	210
Restoration	1,000
\$	149,600
Construction Contingency (10%)	15,000
Construction Sub-Total \$	164,600
Non- Construction Costs	
Legal and Accounting \$	300
Design Engineering	40,000
Construction Engineering and Observation	<u>17,600</u>
Non-Construction Sub-Total \$	<u>57,900</u>
Penn Avenue Area Sewer Separation Estimated Cost \$	222,500
Sewer Rehabilitation/CIPP Lining	
Construction Costs	
CIPP Lining, 8- to 24-inch \$	851,881
Lateral Reinstatements	87,500
Televising	4,000
Traffic Control	10,000
Mobilization/Demobilization	<u> 29,000</u>
\$	982,381
Construction Contingency (10%)	<u>98,300</u>
Construction Sub-Total \$	1,080,681
Non-Construction Costs	
Legal and Accounting \$	2,000
Design Engineering	5,000
Construction Engineering and Observation	· <u>74,000</u>
Non-Construction Sub-Total \$	<u>81,000</u>
Sewer Rehabilitation/CIPP Lining Total Cost \$	1,161,681
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**Total Estimated Cost for All Four Projects** 

\$ 6,295,916

**B.** Land acquisition (\$4,000) in the Woodrow/Vance project is ineligible for funding from the State Revolving Fund (SRF) Loan Program. Fort Wayne will finance the eligible project items with a 20-year loan from the SRF Loan Program at an interest rate determined at loan closing. Monthly user rates and charges may need to be analyzed further to determine if any adjustments are required for debt service.

### VI. DESCRIPTION OF EVALUATED ALTERNATIVES

**No Action:** The no-action alternative would result in noncompliance with the city's LTCP and would subject the city to possible regulatory action. For these reasons, this alternative was not considered.

**Optimum Operation**: The city operates the collection system as effectively as possible, but the collection system cannot handle the peak flow rate and total volume of wastewater collected during storm events. Operational efficiencies do not negate the need to rehabilitate and remove storm water from the collection system. Therefore, the option of optimum operation alone was rejected.

**Selected Plan**: The city has chosen to implement the projects described above in Section IV. The projects will reduce frequency and volume of CSO discharges from CSOs 45, 51, 53, 54, and 68.

### VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

### A. Direct Impacts of Construction and Operation

Undisturbed/Disturbed Land: The projects will be constructed in previously disturbed street rights-of-way or in previously disturbed easements. Archaeological surveys of the Woodrow/Vance, Smith & Roosevelt, and Penn Ave. project areas did not locate archaeological materials.

Surface Waters, Groundwater and Wetlands (Figures 2 through 5): The projects will not affect surface waters or wetlands.

Structural Resources (Figures 6, 7, 8, and 9a, 9b, 9c, 9d, 9e and 9f): The project will not will not alter, demolish or remove historic properties. Any visual, audible or atmospheric effects will be temporary. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

100-Year Floodplain: The projects will not affect the 100-year floodplain.

Plants and Animals: Approximately 28 trees will be removed to install sanitary and storm sewers in the Woodrow/Vance Sewer Separation project; the trees will be replaced. Two or three trees may be removed in the Smith & Roosevelt project. In the Penn Ave. project, a 12-inch storm sewer will be installed by directional drilling under the trees on the river bank to connect with an existing storm sewer.

Prime Farmland: The proposed projects will not affect prime farmland.

Air Quality: Air quality will be temporarily impacted by construction activities, including vehicle exhaust and dust.

Open Space and Recreational Opportunities: The proposed projects will neither create nor destroy open space and recreational opportunities.

The proposed projects will not affect National Natural Landmarks or the Lake Michigan Coastal Zone.

### B. Indirect Impacts

The city's Preliminary Engineering Report (PER) states: the City will ensure through the authority of its Council, planning commission, or other means, that future development, as well as future distribution system or treatment works projects connecting to the SRF-funded facilities, will not adversely impact wetlands, archaeological/historical/structural resources, or other sensitive environmental resources. The City will require new development and treatment works projects to be constructed within the guidelines of the US Fish and Wildlife, IDNR, IDEM, and other environmental review authorities.

### C. Comments from Environmental Review Authorities

The Natural Resources Conservation Service, in correspondence dated January 29, 2009 stated: The project to make...sewer collection system improvements...will not cause a conversion of prime farmland.

The State Historic Preservation Officer (SHPO) has commented on three of the proposed projects. In correspondence dated March 5, 2009, regarding the Woodrow/Vance project and April 17, 2009, regarding the Smith & Roosevelt project, the SHPO stated: Based on our analysis, it has been determined that no historic properties will be altered, demolished, or removed by the proposed project. We concur with the archaeological report that no further archaeological investigations are necessary.

In correspondence dated May 27, 2009 regarding the Penn Ave. project, the SHPO stated: Based on our analysis, it has been determined that no historic properties will be altered, demolished, or removed by the proposed project provided that the proposed project activities remain within areas disturbed by previous construction or in areas subjected to archaeological investigations (Graham/McCullough, 3/16/09). We concur with the archaeological report that no currently known archaeological resources eligible for inclusion in the National Register of Historic Places have been recorded within the proposed project area. No further archaeological investigations appear necessary.

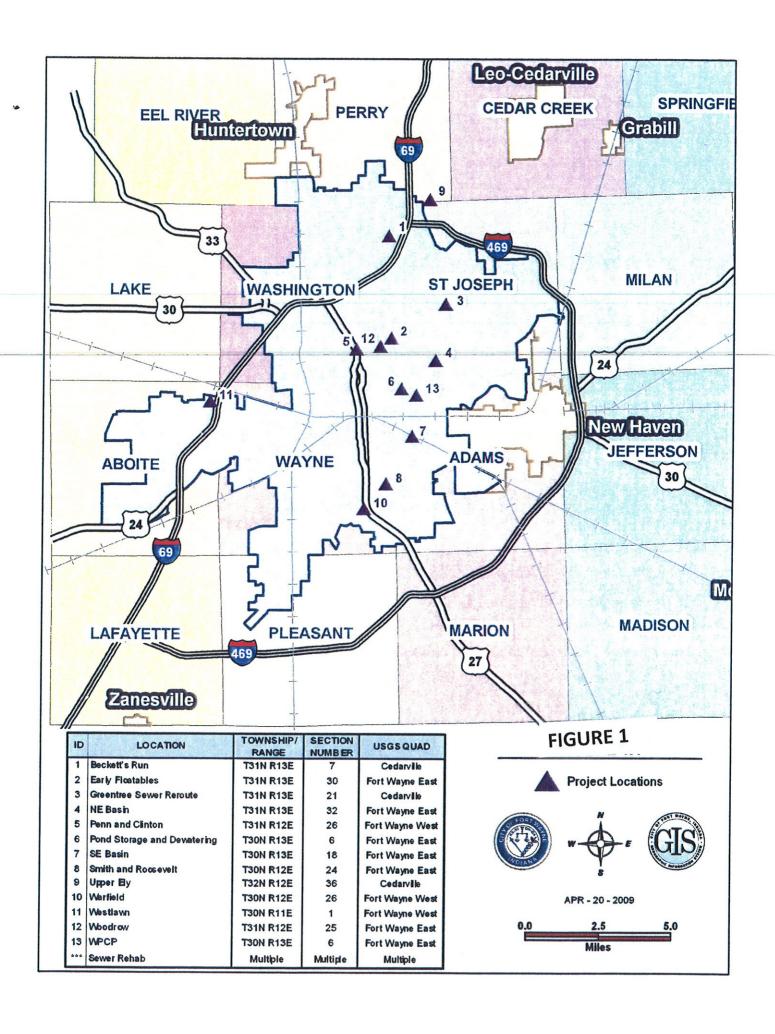
This document is the first notice to the SHPO describing the Sewer Rehabilitation/CIPP Lining project, as well as the first notice to the U.S. Fish and Wildlife Service and the IDNR Environmental Unit describing all the projects.

### VIII. MITIGATION MEASURES

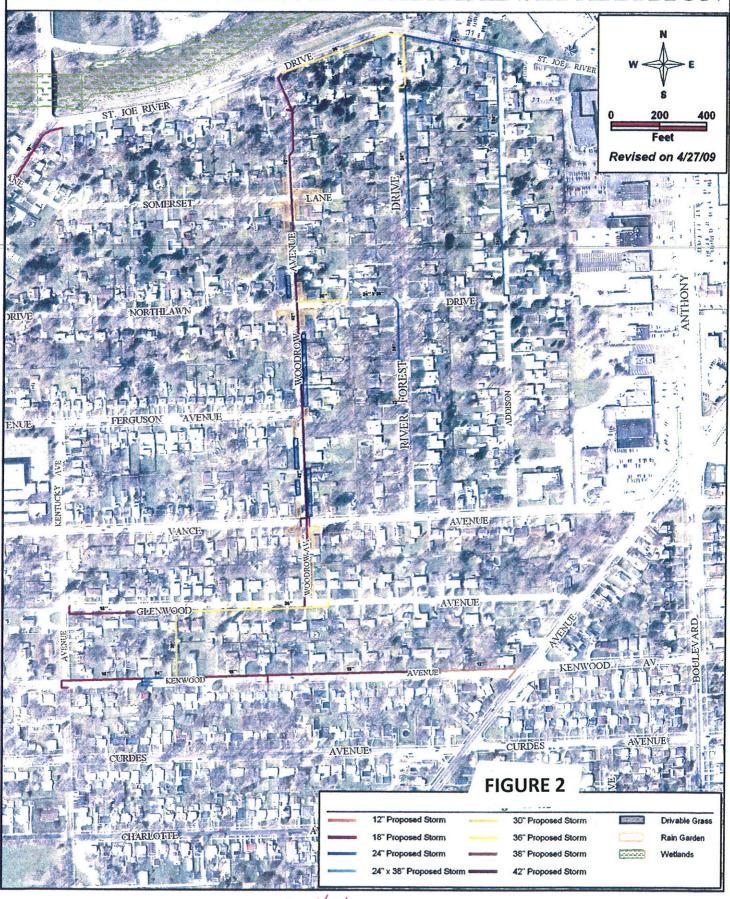
The city's PER, states: The project will be designed and implemented to minimize soil erosion and mitigation measures cited in comment letters from governing agencies will be implemented. The construction and operation of the proposed projects will not negatively impact state and federal listed endangered species or their habitat. The projects will be implemented to minimize the impact to non-endangered species and their habitat. Mitigation measures cited in comment letters from IDNR, and the U.S. Fish and Wildlife Service will be implemented.

### IX. PUBLIC PARTICIPATION

A properly noticed Public Hearing was held on March 4, 2009 at 10:00 am at the City County Building, Omni Room, One East Main Street. The city did not receive written comments in the 5-day period following the public hearing.



## WOODROW AND VANCE AREA SEWER SEPARATION CSSCIP - PARTIAL SEPARATION



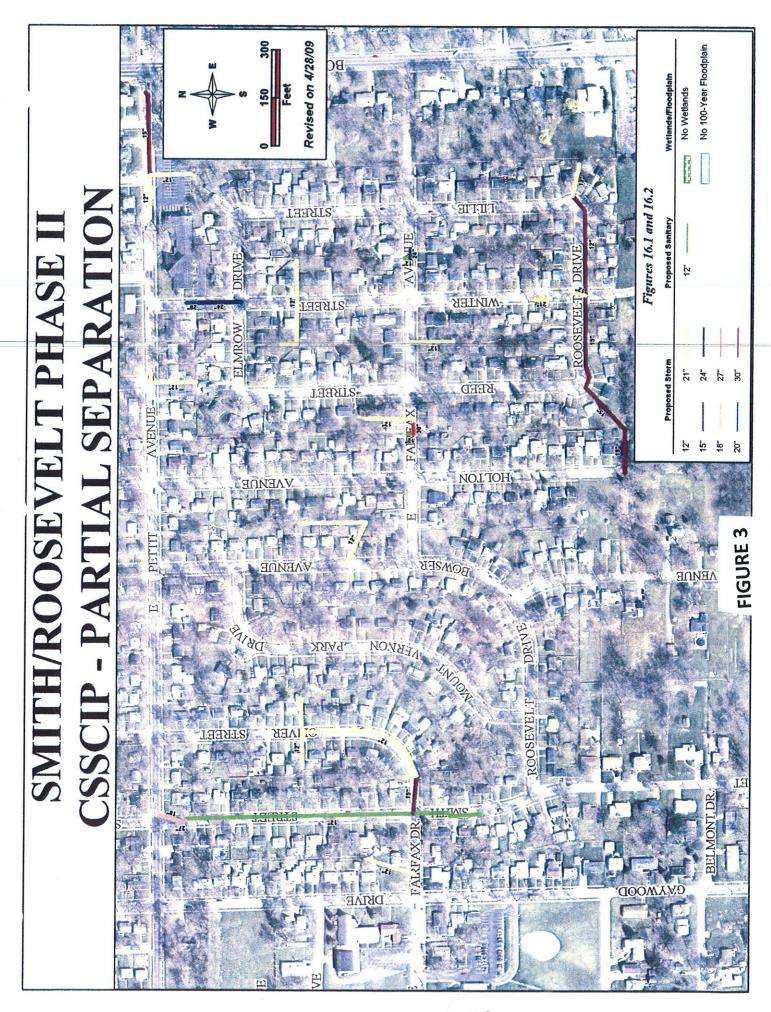
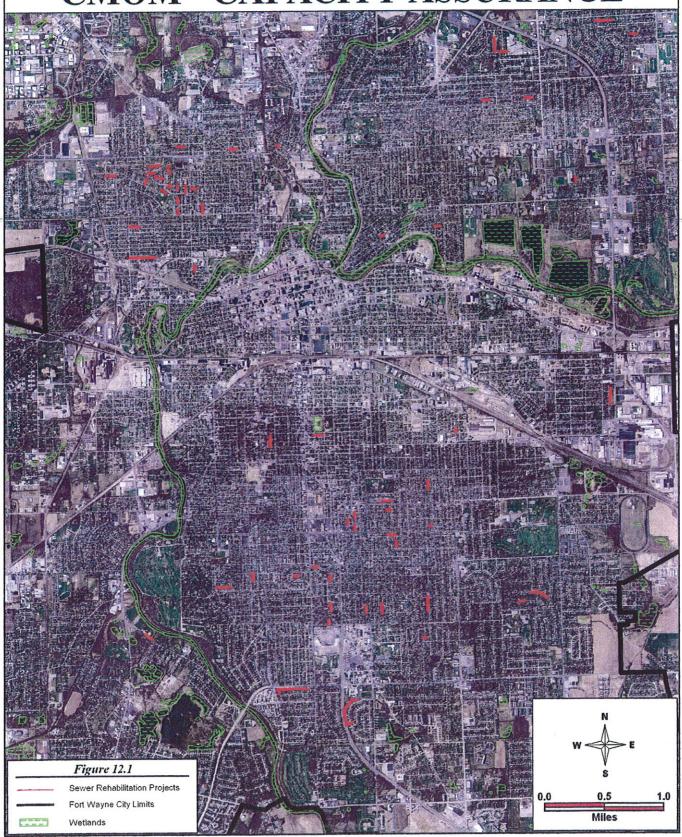


FIGURE 3

# Revised on 6/19/09 GEONEINE EIGNENT NORTHE PENN AVE AREA SEWER SEPARATION CSSCIP - PARTIAL SEPARATION FIGURE 4 Existing Storm Sewer 76 How Existing Combination Sewer 15" Proposed Storm Sewer 14" Proposed Storm Sewer 12" Proposed Storm Sewer Figure 11.1 FIGURE 4

### SEWER REHABILITATION CMOM - CAPACITY ASSURANCE





House, 701 Maple Grove Ave.; Greek Revival/Italianate, c.1870; Architecture



Zion Lutheran Church, 4601 Hanna St.; Craftsman, c. 1929; Architecture, Religion 002 C

O.P. & Mary Shierling House, 5031 Hanna St.; Craftsman, c.1925; Architecture C 003

004 C

House, 5215 Hanna St.; Craftsman, c.1925; Architecture

Leonard & Elva Pranger House, 4402 South Park Dr.; Craftsman Bungalow, c.1927; Architecture

005 C

FIGURE

Indiana Historic Sites & Structures Inventory Smith & Roosevelt Project Area YNOHTHA HTUOS BOULEVARE from: Fort Wayne Interim Report 9

**Indiana Historic Sites & Structures Inventory** 

**Smith & Roosevelt Project Area** 

from: Fort Wayne Interim Report

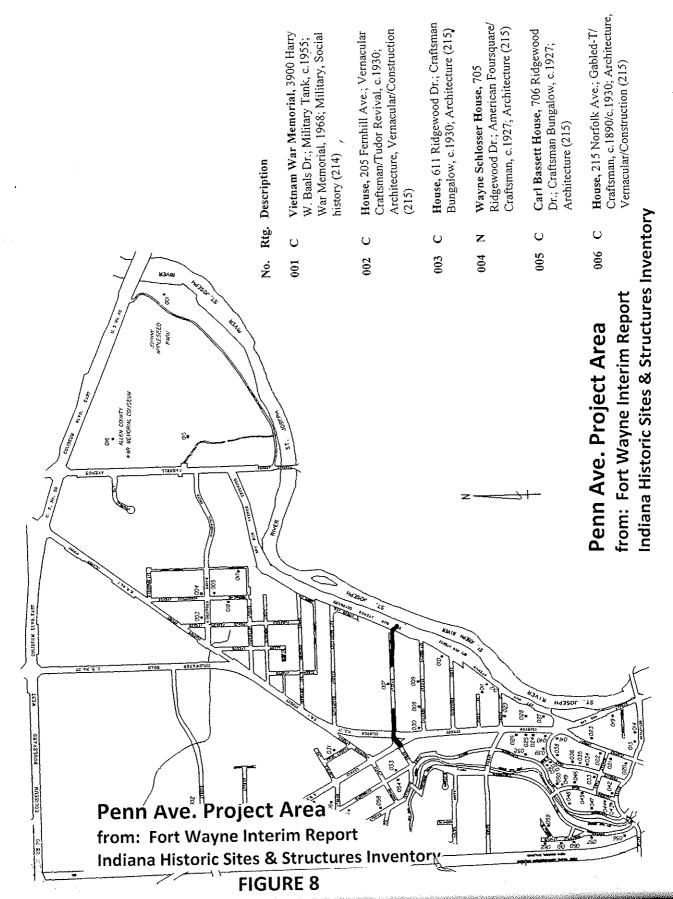


FIGURE 8

**FIGURE 9A** 

Indiana Historic Sites & Structures Inventory

from: Fort Wayne Interim Report

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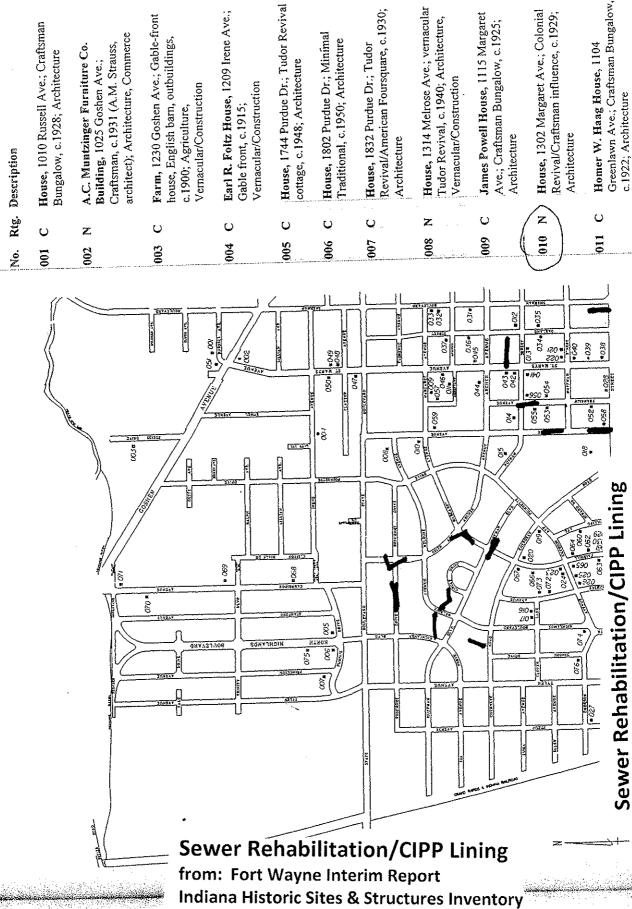


FIGURE 9A

FIGURE 9b

# Sector 21

# akeside Potential Historic District (003-214/215-21001/21445)

first suburb came into being. The majority of houses frough the area from downtown, and Fort Wayne's likes were built along the river banks to protect the omes to one story cottages representing the Queen inne, Colonial Revival, Craftsman, and American and that formed a peninsula at the intersection of and from flooding, a street car line was extended if this potential district were constructed between company purchased a large tract of undeveloped In 1890, the Fort Wayne Land and Improvement le St. Joseph, Maumee, and St. Mary's Rivers. 893 and 1920, and vary from large, two-story oursquare styles of architecture.

### House; Queen Anne cottage, c.1905 (C) Harry Prochal House; Craftsman, c.1925 (C) House; Gable Front/Queen Anne, c.1895 (C) House; Queen Anne/Gabled Ell, c.1905 (C) House; Queen Anne, c. 1905 (C) House; Queen Anne/Craftsman, c.1905/c.1925 (C) House; Queen Anne/Gabled Ell cottage, c. 1905 (C) House; Queen Anne/Gabled Ell cottage, c.1900 (N) Imwood Ave. (North Side) Description o. Add. 1011 1101 03 1111 04 1115 02 1107 07 1125 06 1121

House; Queen Anne/Gabled Ell

000 1135

FIGURE 9c

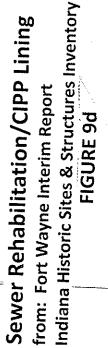
ndiana Historic Sites & Structures Inventory

from: Fort Wayne Interim Report

cottage, c.1905 (C)

ARHOE Sewer Rehabilitation/CIPP Lining WWY AN Sewer Rehabilitation/CIPP Lining from: Fort Wayne Interim Report Indiana Historic Sites & Structures Inventory

FIGURE 9c



House, 140 E. Masterson Ave.; Queen

010

Anne, c.1890; Architecture

(Demolished)

Home Telephone Co. South Branch,

600

Neoclassical, c. 1900; Architecture,

Communications

12-116 E. Masterson Ave.;

House, 518 Wallace St.; Gable-front,

2

007

c.1865; Vernacular/Construction

House, 514 Wallace St.; Gable-front,

S

900

c.1865; Vernacular/Construction

Commercial Bldg., 541 Wallace St.;

800

Queen Anne, 1900; Architecture,

Commerce -

# Sector 38 (003-215-38001-38110)

Olds Wagon Works, South 200 Block

Z

001

Description

No. Rtg.

c.1882 (George Trenam, architect);

Architecture, Industry

Murray St.; Italianate Industrial,

House, 454 Wallace St.; Queen Anne,

Ü

903

c.1890; Architecture (Demolished)

St.; Functional, c.1880; Architecture,

Industry (Demolished)

Pioneer Coal Co., 217-241 Murray

Ų

002

House, 508 Wallace St.; Gable-front,

O

004

c.1880; Vernacular/Construction

Demolished)

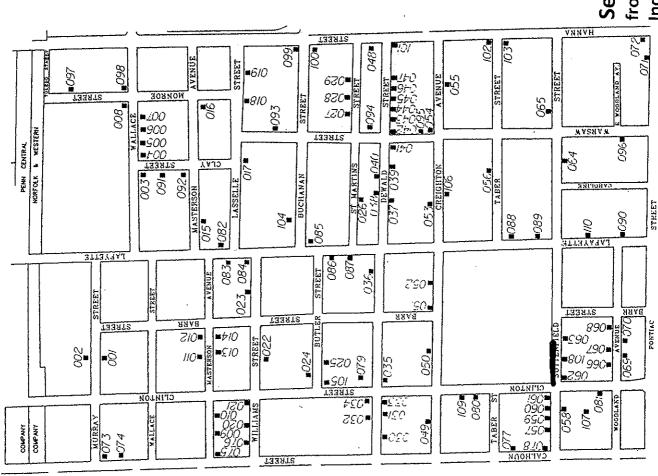
House, 512 Wallace St.; Gable-front,

C

905

c.1880; Vernacular/Construction

(Demolished)



### Sewer Rehabilitation/CIPP Lining

from: Fort Wayne Interim Report **Indiana Historic Sites & Structures Inventory** 

·1916 S.

1934 S.

mmerce

5



Sector 43

### Harrison Hill Potential Historic District (003-215-43

PARKWAY AVENUE LEXINGTON AVENUE CIRCLE SEMINOLE 180 RADIAL LANE 194 SEMINOLE 1,5 CIRCLE PASADENA DR

Harrison Hill is begun in 1915 b Albert Schaaf. landscaped boul designed for mo areas; paved stre markers. There shapes to accom Constructed bet encompass all e: bungalows to la homes on the bo

No. Add.

W. Rudisill Blv

115 101

116 119

W. Foster Parl

117 116

W. Branning /

118 112

119 120

W. Branning

120 109

121 137

### Sewer Rehabilitation/CIPP Lining

from: Fort Wayne Interim Report **Indiana Historic Sites & Structures Inventory** 

FIGURE 9e

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ouse; uss,

(NC)

(C)

МсКІЙИІЕ AYENUE Lafayette Place Potential Historic District (003-215-51001/51419) WAROUTINE 125 CHAMPLAIN DRIVE 82 356 ₹ŝ 180 181 331 STREET 293-296 26 27 AVENUE CONGRESS 28 -29 30 -31 346 297 Indiana Historic Sites & Structures Inventory 138 139 209 Sewer Rehabilitation/CIPP Lining ESPLANADE KENILWORT from: Fort Wayne Interim Report 305 203 36 35 TERRACE 398 306 42 38 6 120 LAFAYETTE 309 AVENUE GLENCOE 3 285 30 CALHOUN 3/4 60 AVENUE 75 288 MAPLE 320 AVENUE 104 Sector 51 PETTIT AVENUE Sewer Rehabilitation/CIPP Lining

from: Fort Wayne Interim Report Indiana Historic Sites & Structures Inventory FIGURE 9f